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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/719,924

11/21/2003

Marc M. Baum

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EXAMINER

KURTZ, BENJAMIN M

ART UNIT

PAPER NUMBER

1723

MAIL DATE

DELIVERY MODE

08/21/2007

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/719,924

Applicant(s)

BAUM ET AL.

Examiner

Benjamin Kurtz

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21,54,55 and 60-77 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21,54,55 and 60-77 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 21, 54, 61-64, 66-69 and 71-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Putz et al. US 5 980 736.

Regarding claim 21, Putz teaches a wet and dry weather disinfection system comprising: a disinfecting chemical dispenser located in-line to a storm water management infrastructure, where the disinfectant chemical dispenser is configured to add a disinfectant chemical into water, a sensor (20, 21) configured to measure water pollution characteristics of the water, a control unit that controls an amount of said disinfectant chemical added to the water based on the pollution characteristics (fig. 1, col. 3, lines 19-32, col. 4, lines 14-25 and 55-60).

Regarding claims 54, Putz further teaches said sensor is located upstream of said disinfection chemical dispenser (fig. 1).

Regarding claim 61, Putz teaches an automated in-line storm water disinfection system comprising: a monitor for measuring flow rate of water through a water management infrastructure (col. 7, lines 30-35), a means for disinfecting water (30,32,34), a control unit located in-line to a water management infrastructure and electrically coupled to the flow rate monitor, said control unit electrically coupled to the

disinfecting means and capable of dispensing disinfectant into water based on the flow rate, and at least one sensor (20,21) coupled to said control unit that measures water pollution characteristics (fig. 2, col. 3, lines 19-32, col. 4, lines 14-25 and 55-60).

Regarding claims 62-64, Putz further teaches the disinfection system comprises a mixing chamber (22) (fig 2); the mixing chamber comprises a bypass unit (22, 28) (fig. 2); and said water disinfecting means is a chemical dispenser (23-25) (fig. 2).

Regarding claims 66-68, Putz further teaches said control unit adjusts said water disinfecting means automatically based on physiochemical, biological and hydraulic properties of the water as measured by at least one sensor. These claims do not cite any specific structure and only detail how the system operates as a process step.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production or how it is used. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 227 USDQ 964 (1985).

Regarding claims 69 and 71-73, Putz further teaches said at least one sensor is upstream of the disinfecting means (fig. 2); the at least one sensor measures physiochemical and biological properties of the water (col. 4, lines 55-60); and the at least one sensor is a sensor array (20,21,26) (fig. 2).

Regarding claims 74 and 75, it is unclear what structure the applicant is reciting when claiming the sensor array is a meteorological station. Therefore the sensor array

as taught by Putz is deemed a structural equivalent thereto in that the sensor array of Putz provides dynamic data for adjusting the parameters of the control unit and it is coupled to the control unit via a communications link (fig. 2).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Putz '736.

Regarding claim 60, Putz teaches a method for storm water disinfection, comprising the steps of: placing a disinfection chemical dispenser adjacent to a storm drain collection location, said dispenser configured to add a disinfection chemical into water flowing through said storm drain collection location, measuring water characteristics attributable to said water flowing through said storm drain collection location through at least one sensor (20, 21), determining an amount of disinfection chemical to add to said water flowing through said storm drain collection location based on said water characteristics by a controller connected to said disinfecting chemical dispenser, and adding said amount of disinfection chemical from said chemical dispenser to said water flowing through said storm drain (fig. 1, col. 3, lines 19-32, col. 4, lines 14-25 and 55-60). Putz does not teach the chemical dispenser being portable. The fact that a claimed device is portable or movable is not sufficient by itself to

patentably distinguish over an otherwise old device unless there are new or unexpected results *In re Lindberg*, 93 USPQ 23 (1952).

3. Claims 55, 70, 76 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Putz '736 in view of O'Leary et al. US 4 659 459.

Regarding claims 55 and 70, Putz teaches the system of claim 21 and 61 but does not teach a downstream sensor. O'Leary teaches a water disinfection system having a disinfection chemical dispenser with a control unit comprising a downstream sensor (118) from the disinfection chemical dispenser that measures water characteristics (fig. 1, col. 8, lines 15-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a downstream sensor as taught by O'Leary because the downstream sensor relays information to the control unit to better regulate the amount of chemical added to the system (col. 2, lines 45-61).

Regarding claim 76, Putz teaches an automated in-line wet and dry weather water flow disinfection system comprising: an in-line flow rate monitor (col. 7, lines 30-35), a chemical dispenser (23-25) for dispensing a disinfectant chemical into a mixing chamber (22), a control unit located in-line to a storm water management infrastructure and electrically coupled to the flow rate monitor and to the chemical dispenser and capable of controlling the amount of chemical disinfectant based on the flow rate, and at least one upstream sensor (20,21,46) coupled to the control unit (fig. 2). Putz does not at least one downstream sensor. O'Leary teaches a water disinfection system having a disinfection chemical dispenser with a control unit comprising a downstream sensor (118) from the disinfection chemical dispenser that measures water characteristics (fig.

1, col. 8, lines 15-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a downstream sensor as taught by O'Leary because the downstream sensor relays information to the control unit to better regulate the amount of chemical added to the system (col. 2, lines 45-61).

Regarding claim 77, Putz in view of O-Leary teaches the system of claim 76 but does not teach the biologic properties further comprising the concentration of pathogenic microorganisms. It would have been obvious to one of ordinary skill in the art to use a sensor capable of detecting the concentration of pathogenic microorganisms because the system of Putz is configured to provide substances for disinfecting the water and it would be advantageous to adjust the amount of disinfectant substance added based on this characteristic of the water.

Claim 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over Putz '736 in view of Brown et al. US 2003/0030011 A1.

Putz teaches the system of claim 61 but does not teach the water disinfecting means is a UV source or a UV spectrometer. Brown teaches that UV light is well known in the water purification art to disinfect water (paragraph 7) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a UV light source because it deactivates pathogens such as viruses, bacteria, fungus, microorganisms and other harmful substances (paragraph 7). Brown further teaches a sensor is a UV spectrometer interfaced with the product from via a fiber optic cable (paragraph 175). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the fiber optic cable interface as taught by Brown

because they monitor the signals of UV light and are used to adjust and verify the operating parameters of the fluid treatment system (paragraph 174 and 175).

### ***Response to Arguments***

4. Applicant's arguments filed 7/11/07 have been fully considered but they are not persuasive.

Regarding claims 21 and 54, applicant has argued the system of Putz '736 is not applicable to a storm water management infrastructure because Putz requires a supply of drinking water. The system of Putz treats surface and/or rainwater and it therefore a storm water management infrastructure.

Regarding claim 60, Putz teaches the use of an upstream sensor but does not teach that no downstream sensor may be used but teaches the sensor may be provided at any point in the container as long as it is in contact with the water (col. 4, lines 21-25). O-Leary is directed to a system of treating water and expressly teaches it may be used in any water treatment or conditioning system (col. 3, lines 18-21).

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Kurtz whose telephone number is 571-272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Benjamin Kurtz  
Patent Examiner 1723  
8/14/07

A handwritten signature in black ink, appearing to read 'Krishnan Menon', with a stylized, cursive script.

**KRISHNAN MENON**  
**PRIMARY EXAMINER**